

CLAIMS:

1. A semiconductor device in which bumps formed on a surface of a semiconductor chip and leads are set to face each other and bonded, wherein:

each one said bumps is provided with a recess in a surface thereof that faces each of said leads, the recess comprising guide-surfaces that are inclined surfaces and are formed between a bottom of said recess and opening edges of said recess; and

each of said leads is provided with a projection formed at one end thereof so as to be bonded to each of said bumps, said projection being formed with guided-surfaces that are inclined surfaces.

2. The semiconductor device according to claim 1, wherein said guide-surfaces are formed for an entire periphery of said recess of said each one of said bumps, and said guided-surfaces are formed so as to surround a bonding point of said lead.

3. The semiconductor device according to claim 1, wherein a width of an end surface of each of said leads that faces a bump is narrower than a width of said lead.

4. The semiconductor device according to claim 2, wherein a width of an end surface of each of said leads that faces a bump is narrower than a width of said lead.

5. A method for manufacturing a semiconductor device that includes a step of facing and bonding bumps formed on a surface of a semiconductor chip and leads, said method further comprising the steps of:

forming a recess in a surface of each of said bumps that faces each of said leads, said recess having inclined surfaces between a bottom of said recess and opening edges of said recess, and

forming a projection at one end of each of said leads so as to be bonded to each of said bumps, said projection being provided with guided-surfaces that are inclined surfaces.

6. The method for manufacturing a semiconductor device according to claim 5, wherein said guide-surfaces are formed for an entire periphery of said recess of said each one of said bumps, and said guided-surfaces are formed so as to surround a bonding point of said lead.

7. The method for manufacturing a semiconductor device according to claim 5,
wherein a width of an end surface of each of said leads that faces a bump is narrower than a
width of said lead.

TECHNICAL FIELD